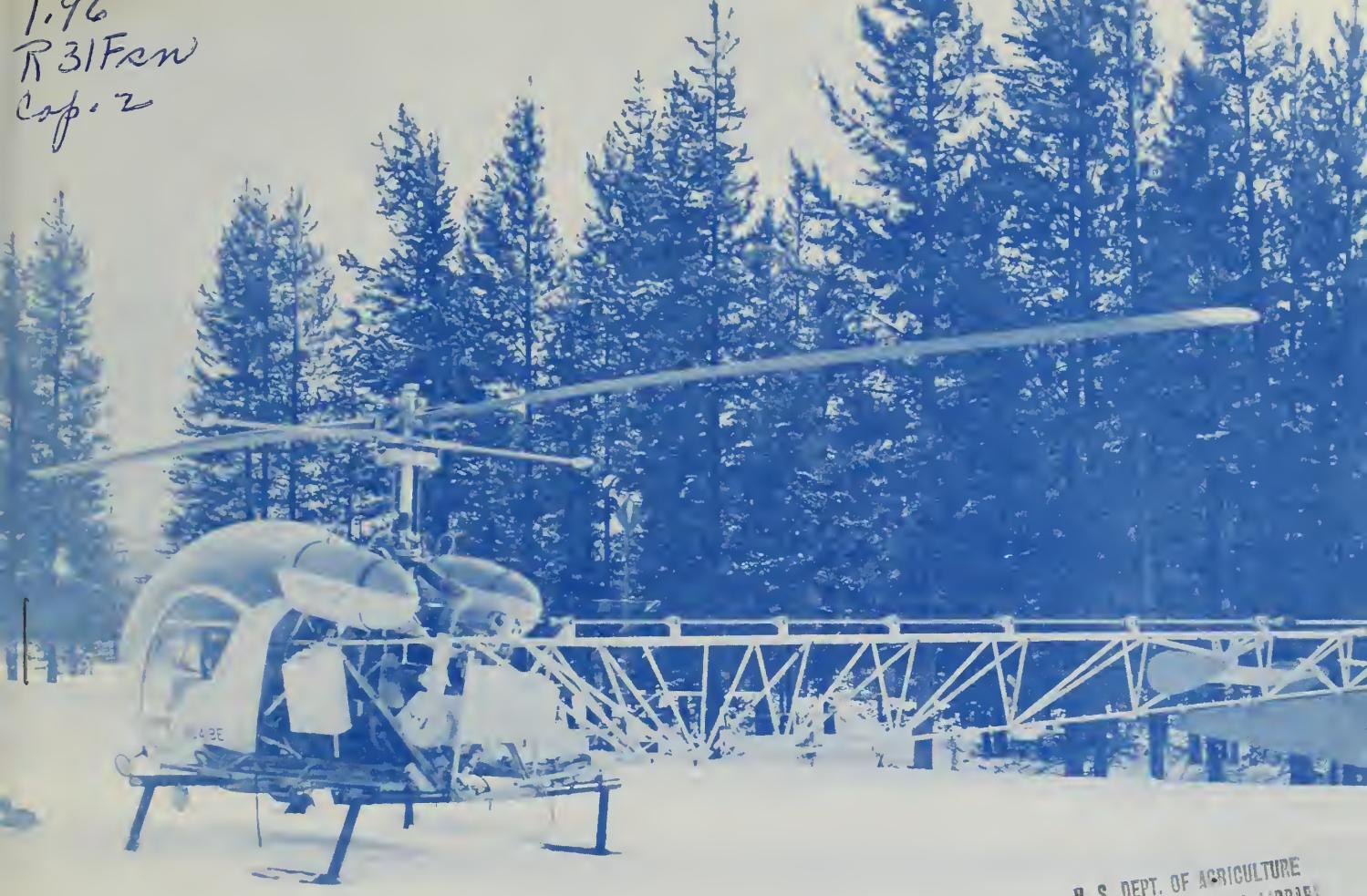


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# FALL WATER SUPPLY SUMMARY for NEVADA

UNITED STATES DEPARTMENT of AGRICULTURE...SOIL CONSERVATION SERVICE,  
and

NEVADA DEPARTMENT of CONSERVATION and NATURAL RESOURCES  
DIVISION of WATER RESOURCES

Data included in this report were obtained by the agencies named above  
in cooperation with the Federal, State and private organizations listed  
on the last page of this report.

AS OF  
OCT. 1, 1965

# UNITED STATES DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE

## To Recipients of Water Supply Outlook Reports:

The climate of the cultivated and populated areas of the West is characterized by relatively dry summer months. Such precipitation as occurs falls mostly in the winter and early spring months when it is of little immediate benefit to growing crops. Most of this precipitation falls as mountain snow which stays on the ground for months, melting later to sustain streamflow during the period of greatest demand during late spring and summer. Thus, nature provides in mountain snow an imposing water storage facility.

The amount of water stored in mountain snow varies from place to place as well as from year to year and accordingly, so does the runoff of the streams. The best seasonal management of variable western water supplies results from advance estimates of the streamflow.

A snow survey consists of a series of about ten samples taken with specially designed snow sampling equipment along a permanently marked line, up to 1000 feet in length, called a snow course. The use of snow sampling equipment provides snow depth and water equivalent values for each sampling point. The average of these values is reported as the snow survey measurement for a snow course.

Snow surveys are made monthly or semi-monthly beginning in January or February and continue through the snow season until April, May or June. Currently more than 1400 western snow courses are measured each year. These measurements furnish the key data for water supply forecasts.

Streamflow forecasts are obtained by a comparison of total or maximum snow accumulation, as measured by snow water equivalent, to the subsequent spring and summer or snowmelt season runoff over a period of years. The snow water equivalent measured in selected snow courses provides most of the index to the streamflow forecast for the following season. More accurate forecasts are usually obtained when other factors such as soil moisture, base flow and spring precipitation are considered and included in the forecast procedure. Early season forecasts assume average climatic conditions through the snowmelt season.

Listed below are the Federal-State-Private Cooperative Snow Survey and Water Supply Forecast reports available for the West which contain detailed information on snow survey measurements, streamflow forecasts, reservoir storage, soil moisture and other guide data to water management and conservation decisions. Soil Conservation Service Reports may be secured from Soil Conservation Service, 511 N.W. Broadway - Room 507, Portland, Oregon 97209.

## PUBLISHED BY SOIL CONSERVATION SERVICE

<u>REPORTS</u>	<u>ISSUED</u>	<u>LOCATION</u>	<u>COOPERATING WITH</u>
<b>RIVER BASINS</b>			
WESTERN UNITED STATES	MONTHLY (FEB.-MAY)	PORTLAND, OREGON	ALL COOPERATORS
BASIC DATA SUMMARY	OCTOBER 1	PORTLAND, OREGON	ALL COOPERATORS
<b>STATES</b>			
ALASKA	MONTHLY (MAR.-MAY)	PALMER, ALASKA	ALASKA S.C.D.
ARIZONA	SEMI-MONTHLY (JAN.15 - APR.1)	PHOENIX, ARIZONA	SALT R. VALLEY WATER USERS ASSOC. ARIZ. AGR. EXP. STATION
COLORADO AND NEW MEXICO	MONTHLY (FEB.-MAY)	FORT COLLINS, COLORADO	COLO. STATE UNIVERSITY COLO. STATE ENGINEER N. MEX. STATE ENGINEER
IDAHO	MONTHLY (JAN.-JUNE)	BOISE, IDAHO	IDAHO STATE RECLAMATION ENGINEER
MONTANA	MONTHLY (JAN.-JUNE)	BOZEMAN, MONTANA	MONT. AGR. EXP. STATION
NEVADA	MONTHLY (JAN.-MAY)	RENO, NEVADA	NEVADA DEPT. OF CONSERVATION AND NATURAL RESOURCES - DIVISION OF WATER RESOURCES
OREGON	MONTHLY (JAN.-JUNE)	PORTLAND, OREGON	OREG. STATE UNIVERSITY OREGON STATE ENGINEER
UTAH	MONTHLY (JAN.-JUNE)	SALT LAKE CITY, UTAH	UTAH STATE ENGINEER
WASHINGTON	MONTHLY (FEB.-JUNE)	SPOKANE, WASHINGTON	WN. STATE DEPT. OF CONSERVATION
WYOMING	MONTHLY (FEB.-JUNE)	CASPER, WYOMING	WYOMING STATE ENGINEER

## PUBLISHED BY OTHER AGENCIES

<u>REPORTS</u>	<u>ISSUED</u>	<u>AGENCY</u>
BRITISH COLUMBIA	MONTHLY (FEB.-JUNE)	WATER RESOURCES SERVICE, DEPT. OF LANDS, FOREST AND WATER RESOURCES, PARLIAMENT BLDG., VICTORIA, B.C., CANADA
CALIFORNIA	MONTHLY (FEB.-MAY)	CALIF. DEPT. OF WATER RESOURCES, P.O. BOX 388, SACRAMENTO, CALIF.

# FALL WATER SUPPLY SUMMARY for NEVADA

*Report prepared by*

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OCTOBER 8, 1965

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FALL WATER SUPPLY SUMMARY

FOR NEVADA

October 1, 1965

Nevada's 1965 irrigation water supply was excellent. As forecast last spring the above normal snowpack produced above average April-July streamflow, which held up into August and September much longer than usual. Only moderate amounts of reservoir stored water was needed. The water used was replaced by streamflow to the extent that Nevada's principal reservoirs held more water on October 1, 1965 (1,144,000 a.f.) than on May 1, 1965 (1,095,000 a.f.).

Nevada's seven principal reservoirs, exclusive of Lakes Mead and Mohave, are 83 percent of capacity and 200 percent of the October 1, 1948-62 average. Some water may have to be spilled to provide winter flood control room and space for next spring and summer's snowmelt runoff.

Heavy late spring and early summer rainfall coupled with below normal temperature slowed plant growth and harvesting. East slope Sierra and northern Nevada mountain soils are well wetted with only moderate amounts of moisture required to wet them to field capacity.

All data currently available indicate potentially favorable prospects for the coming 1966 irrigation season.

The first 1966 Water Supply Outlook Report will be issued on January 8, 1966, to be followed by subsequent monthly reports on February 8, 1966, March 8, 1966, April 8, 1966, and May 8, 1966. These reports will contain the latest snow survey precipitation, reservoir, and soil moisture data along with April-July 1966 stream forecasts and dates of specified low flow amounts.



APRIL-JULY 1965  
NEVADA STREAMFLOW FORECASTS  
AND  
OBSERVED STREAMFLOW

The following table contains April-July forecasts made during the past winter except as otherwise noted. Observed streamflow amounts are provisional and were furnished by the U. S. Geological Survey and other agencies.

	April-July, Streamflow Thousand Acre-Feet							
	Forecast				Observed			
	Feb.	Mar.	Apr.	May*	Observed:15-Yr. : 1965	Apr-July: Av. : as %	1948-62:15-Yr. Av.	
	1 1965	1 1965	1 1965	1 1965	1965	1965	1965	
Owyhee R. nr. Gold Cr., Nev. <sup>1</sup>	24	23	22	11 (15)	28	22	127	
Owyhee R. nr. Owyhee, Nev. <sup>1</sup>	80	78	74	48 (54)	97	74	131	
Lamoille Cr.nr. Lamoille, Nev.	34	32	30	30 (32)	34	26	131	
So.Fk. Humboldt nr. Elko, Nev.	75	70	59	59 (81)	93	60	155	
Marys River above Hot Springs, Nev.	36	33	22	22 (40)	52	34	153	
N.Fk. Humboldt at Devils Gate, Nev.	34	32	20	20 (29)	43	34	126	
Humboldt R. at Palisade, Nev.	225	200	150	150 (201)	247	173	143	
Humboldt R. at Comus, Nev.	170	145	110	110 (172)	211	127	166	
Martin Cr. nr. Paradise, Nev.	18	17	10	10 (13)	19	17	112	
E. Walker nr. Bridgeport, Calif. <sup>2</sup>	90	90	75	75 (81)	88	57	154	
West Walker below E.Fk. nr. Coleville, Calif.	210	200	200	180 (168)	186	140	133	
E. Carson nr. Gardnerville, Nev.	250	250	205	205 (193)	235	179	131	
E. Carson nr. Gardnerville, Nev. (date of 200 c.f.s. flow)	8/3	8/3	8/5		8/27	7/20	---	
W. Carson at Woodfords, Calif.	75	75	60	60 (57)	72	52	138	
Carson R. nr. Carson City, Nev.	235	235	195	195 (194)	243	169	144	
Carson R. at Ft.Churchill, Nev.	220	220	180	180 (175)	218	155	141	
Little Truckee R. above Boca, Cal. <sup>3</sup>	117	108	71	71 (86)	129	78	165	
Truckee R. at Farad, Calif. <sup>3,4</sup>	345	320	220	220 (222)	320	269	119	
Lake Tahoe <sup>3,5</sup>	1.80	1.70	1.27	1.27 (1.13)	1.76	1.47	120	
Surprise Valley Streams	Observed data not yet available							

1 Corrected for storage in Wild Horse Reservoir.

2 For period April through August corrected for storage in Bridgeport Reservoir.

3 Forecast issued by Truckee Basin Water Committee which is composed of Truckee-Carson Irrigation District, Sierra Pacific Power Company and Washoe County Conservation District.

4 Exclusive of Tahoe and corrected for storage in Boca Reservoir.

5 Maximum rise, in feet, from April 1, assuming gates closed.

\* May 1-July 31, 1965 forecast; figure in parentheses provisional observed streamflow.



NEVADA  
 STATUS OF RESERVOIR STORAGE  
 OCTOBER 1, 1965

BASIN AND STREAM	RESERVOIR	USABLE CAPACITY (1000 A-F)	USABLE STORAGE - 1000 ACRE-FEET				15-YR. AVE. 1948-62
			1965	1964	1963		
Owyhee	Wild Horse	33	18	0*	23		12
Lower Humboldt	Rye Patch	179	- 175	100	72		49
Colorado	Mohave	1,810	1,377	1,341	1,406		1,152**
Colorado	Mead	27,217	14,708	11,623	17,371		19,307
Tahoe	Tahoe	732	655	276	396		391
Truckee	Boca	41	18	9	1		13
Truckee	Prosser	29***	19	16	19	Storage began 1/30/63	
Carson	Lahontan	286	207	97	165		80
West Walker	Topaz	59	41	8	28		14
East Walker	Bridgeport	42	30	8	22		12

\* Reservoir drained during summer to effect repairs to dam.

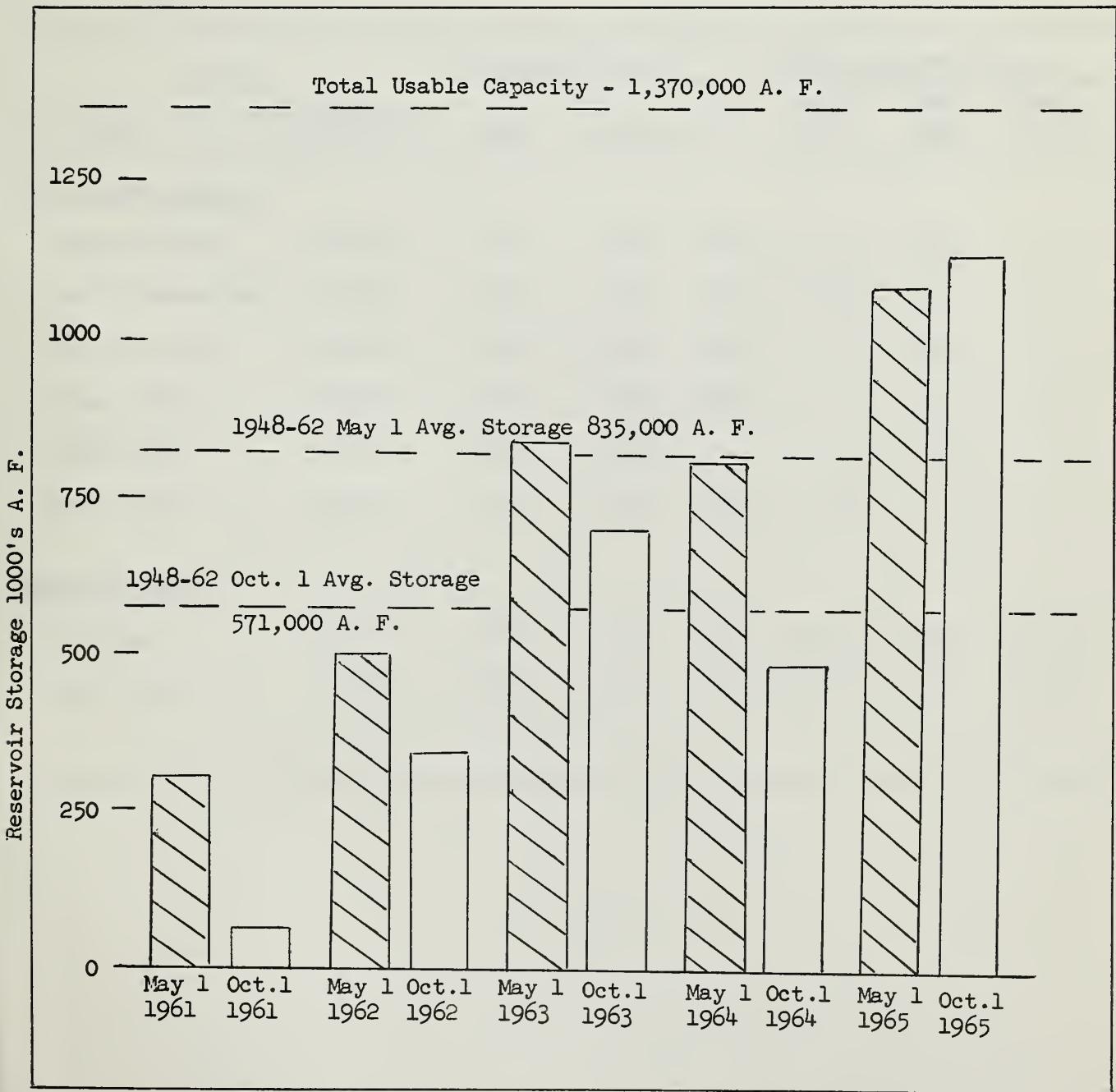
\*\* 1951-62

\*\*\* Flood control use allocation of 20,000 acre-feet between Nov. 1 and April 10.



NEVADA RESERVOIR STORAGE  
1961-65

Based on Wild Horse, Rye Patch, Tahoe,  
Boca, Lahontan, Topaz and Bridgeport Reservoir Storage Data.





## NEVADA

## SOIL MOISTURE

OCTOBER 1, 1965

STATION		PROFILE (Inches)		SOIL MOISTURE (Inches)			
Name	Elevation	DEPTH	CAPACITY	DATE	THIS YEAR	LAST YEAR	2 YEARS AGO
<u>East Slope Sierra</u>							
Hagans Meadow	8000	36	3.65	10/5	2.3	0.8	--
Independence Camp	7000	34	6.10	10/7	6.1	4.5	--
Marlette Lake	8000	50	3.70	10/6	3.7	2.6	--
Sonora Pass	8800	48	8.30	9/28	7.6	6.6	--
Truckee #2	6400	18	3.65	--	---	0.8	--
Ward Creek	7000	49	5.80	10/7	5.7	1.0	--
<u>Humboldt Basin</u>							
Big Bend	6700	48	16.7	7/14	15.7	14.5	14.4
Rodeo Flat	6800	42	11.0	8/17	10.2	8.3	10.0



## Agencies Cooperating in Collecting Data Contained in this Bulletin

### FEDERAL

Agricultural Research Service  
Army  
Bureau of Reclamation  
Fish and Wildlife Service  
Forest Service  
Geological Survey  
Navy  
Soil Conservation Service  
Weather Bureau

### STATE

California Cooperative Snow Surveys  
California Department of Water Resources  
Colorado River Commission of Nevada  
Nevada Association of Soil Conservation Districts  
Nevada Cooperative Snow Surveys  
Nevada Department of Conservation & Natural Resources  
Division of Water Resources  
Nevada State Forester-Firewarden  
Oregon Cooperative Snow Surveys  
University of Nevada  
White Mountain Research Station, Univ. of California

### PRIVATE

Amalgamated Sugar Company  
Kennecott Copper Corporation  
Nevada Irrigation District  
Owyhee Project North Board of Control  
Owyhee Project South Board of Control  
Pacific Gas & Electric Company  
Pershing County Water Conservation District  
Sierra Pacific Power Company  
Squaw Valley Development Company  
Truckee-Carson Irrigation District  
Virginia City Water Company  
Walker River Irrigation District  
Washoe County Water Conservation District

Other organizations and individuals furnish valuable  
information for the snow survey reports. Their  
Cooperation is gratefully acknowledged.

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## **COOPERATIVE SNOW SURVEYS**

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necessary for forecasting  
water supply for irrigation,  
domestic and municipal water  
supply, hydro-electric power  
generation, navigation,  
mining and industry

*“The Conservation of Water begins  
with the Snow Survey”*